

# United States Patent [19]

Downes

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[54] CONTROL APPARATUS FOR ELECTRONIC MUSICAL INSTRUMENT

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[52] U.S. Cl. ..... 84/1.01; 84/1.03;  
446/242

[58] Field of Search ..... 84/1.01, 1.03, 1.27,  
84/DIG. 12, 1.11, 1.19, 1.24; 446/242, 247

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[57] ABSTRACT

In a preferred embodiment of the invention, a control unit which is freely moveable in space is equipped with three sensors to measure motion (e.g. velocity, acceleration, or the time derivative of acceleration) along three substantially orthogonal axes. The sensors may be meter movements configured to output motion signals indicative of their movement in free space, which signals are amplified, digitized, processed by a microprocessor to detect relative minima and maxima. Processed motion signals are converted to standard MIDI control signals for controlling an electronic musical instrument.

36 Claims, 4 Drawing Sheets

